

ClaimsWhat is claimed is:

- 1    1. In a communication network wherein packets of data  
2    are transmitted from a transmitting station to an  
3    addressed receiving station via a plurality of routers  
4    that determine the path of the transmission, a system for  
5    expediting the transmission comprising:  
6        means for transmitting packets, each comprising a  
7    payload section including the content data being  
8    transmitted, a header including the address of the  
9    receiving station and a plurality of other headers;  
10        means for substituting a code item to represent said  
11   plurality of other headers in one of said packets being  
12   transmitted;  
13        means for determining which of said routers is the  
14   destination router to the receiving display station;  
15        means for providing conversion means to said  
16   terminal router for converting said code item back into  
17   said plurality of headers represented by said code items,  
18   whereby conversion means convert said code item back into  
19   said original plurality of headers; and  
20        means for transmitting said packet with original  
21   plurality of headers from said terminal router to said  
22   receiving display station.
- 1    2. The communication network system of claim 1 wherein  
2    said means for providing said conversion means provide  
3    said conversion means to only said destination router.

1 3. The communication network system of claim 1 wherein:  
2 said means for providing said conversion means  
3 provide said conversion means to a set of said routers;  
4 and further including:  
5 means at each of said set of routers for  
6 determining if the header including the address of  
7 the receiving station indicates that the router is  
8 the destination router; and  
9 means responsive to said determining means for  
10 converting said code item through said conversion  
11 means back into said represented plurality of  
12 headers upon a determination that said router is the  
13 destination router.

1 4. The communication network system of claim 2 wherein  
2 said conversion means includes a conversion table.

1 5. The communication network system of claim 4 wherein  
2 said network is a packet switching network.

1 6. In a communication network wherein packets of data  
2 are transmitted from a transmitting station to an  
3 addressed receiving station via a plurality of routers  
4 that determine the path of the transmission, a system for  
5 expediting the transmission comprising:  
6 means for transmitting packets, each comprising a  
7 payload section including the content data being  
8 transmitted, a header including the address of the  
9 receiving station and a plurality of other headers;  
10 means for substituting a code item to represent said  
11 plurality of other headers in one of said packets being  
12 transmitted;  
13 means for determining which of said routers is a  
14 last router beyond which normal transmission is  
15 expedited;  
16 means for providing conversion means to said last  
17 router for converting said code item back into said  
18 plurality of headers represented by said code items,  
19 whereby conversion means convert said code item back into  
20 said original plurality of headers; and  
21 means for normally transmitting said packet with  
22 original plurality of headers from said last router to  
23 said receiving display station.

1 7. The communication network system of claim 6 wherein  
2 said means for providing said conversion means provide  
3 said conversion means to only said last router.

1 8. In a communication network wherein packets of data  
2 are transmitted from a transmitting station to an  
3 addressed receiving station via a plurality of routers  
4 that determine the path of the transmission, a method for  
5 expediting the transmission comprising:  
6 transmitting packets, each comprising a payload  
7 section including the content data being transmitted, a  
8 header including the address of the receiving station and  
9 a plurality of other headers;  
10 substituting a code item to represent said plurality  
11 of other headers in one of said packets being  
12 transmitted;  
13 determining which of said routers is the destination  
14 router to the receiving display station;  
15 providing said conversion process to said terminal  
16 router for converting said code item back into said  
17 plurality of headers represented by said code items,  
18 whereby conversion means convert said code item back into  
19 said original plurality of headers; and  
20 transmitting said packet with original plurality of  
21 headers from said terminal router to said receiving  
22 display station.

1 9. The communication network method of claim 8 wherein  
2 said conversion process is provided only to said  
3 destination router.

1 10. The communication network method of claim 8 wherein:  
2 said conversion process is provided to a set of said  
3 routers;  
4 and further including:  
5 determining at each of said set of routers if  
6 the header including the address of the receiving  
7 station indicates that the router is the destination  
8 router; and  
9 converting said code item through said  
10 conversion process back into said represented  
11 plurality of headers upon a determination that said  
12 router is the destination router.

1 11. The communication network method of claim 9 wherein  
2 said conversion step uses a conversion table.

1 12. The communication network method of claim 11 wherein  
2 said network is a packet switching network.

1 13. In a communication network wherein packets of data  
2 are transmitted from a transmitting station to an  
3 addressed receiving station via a plurality of routers  
4 that determine the path of the transmission, said method  
5 for expediting the transmission comprising:  
6 transmitting packets, each comprising a payload  
7 section including the content data being transmitted, a  
8 header including the address of the receiving station and  
9 a plurality of other headers;  
10 substituting a code item to represent said plurality  
11 of other headers in one of said packets being  
12 transmitted;  
13 determining which of said routers is a last router  
14 beyond which normal transmission is expedited;  
15 providing a conversion process to said last router  
16 for converting said code item back into said plurality of  
17 original headers represented by said code items; and  
18 transmitting said packet normally with original  
19 plurality of headers from said last router to said  
20 receiving display station.

1 14. The communication network method of claim 13 wherein  
2 said means for providing said conversion means provide  
3 said conversion means to only said last router.

1 15. A computer program having code recorded on a  
2 computer readable medium for expediting the transmission  
3 in a communication network wherein packets of data are  
4 transmitted from a transmitting station to an addressed  
5 receiving station via a plurality of routers that  
6 determine the path of the transmission, said program  
7 comprising:

8 means for transmitting packets, each comprising a  
9 payload section including the content data being  
10 transmitted, a header including the address of the  
11 receiving station and a plurality of other headers;  
12 means for substituting a code item to represent said  
13 plurality of other headers in one of said packets being  
14 transmitted;

15 means for determining which of said routers is the  
16 destination router to the receiving display station;

17 means for providing conversion means to said  
18 terminal router for converting said code item back into  
19 said plurality of headers represented by said code items,  
20 whereby conversion means convert said code item back into  
21 said original plurality of headers; and

22 means for transmitting said packet with original  
23 plurality of headers from said terminal router to said  
24 receiving display station.

1 16. The computer program of claim 15 wherein said means  
2 for providing said conversion means provide said  
3 conversion means to only said destination router.

1 17. The computer program of claim 15 wherein:  
2 said means for providing said conversion means  
3 provide said conversion means to a set of said routers;  
4 and further including:  
5 means at each of said set of routers for  
6 determining if the header including the address of  
7 the receiving station indicates that the router is  
8 the destination router; and  
9 means responsive to said determining means for  
10 converting said code item through said conversion  
11 means back into said represented plurality of  
12 headers upon a determination that said router is the  
13 destination router.

1 18. The computer program of claim 16 wherein said  
2 conversion means includes a conversion table.

1 19. The computer program of claim 18 wherein said  
2 network is a packet switching network.



1 20. A computer program having code recorded on a  
2 computer readable medium for expediting the transmission  
3 in a communication network wherein packets of data are  
4 transmitted from a transmitting station to an addressed  
5 receiving station via a plurality of routers that  
6 determine the path of the transmission, said program  
7 comprising:

8 means for transmitting packets, each comprising a  
9 payload section including the content data being  
10 transmitted, a header including the address of the  
11 receiving station and a plurality of other headers;

12 means for substituting a code item to represent said  
13 plurality of other headers in one of said packets being  
14 transmitted;

15 means for determining which of said routers is a  
16 last router beyond which normal transmission is  
17 expedited;

18 means for providing conversion means to said last  
19 router for converting said code item back into said  
20 plurality of headers represented by said code items,  
21 whereby conversion means convert said code item back into  
22 said original plurality of headers; and

23 means for normally transmitting said packet with  
24 original plurality of headers from said last router to  
25 said receiving display station.

1 21. The computer program of claim 20 wherein said means  
2 for providing said conversion means provide said  
3 conversion means to only said last router.